

What is Claimed:

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1. A keratinocyte growth factor fragment or an analog thereof comprising a portion of an amino acid sequence of mature, full-length keratinocyte growth factor, wherein the fragment exhibits at least a 2-fold increase in mitogenic activity as compared to a mature, recombinant, full-length keratinocyte growth factor, and lacks a sequence comprising the first 23 N-terminal amino acid residues of the mature, full-length keratinocyte growth factor.

2. The keratinocyte growth factor fragment as claimed in claim 1, wherein the fragment exhibits a 7-fold increase in mitogenic activity as compared to the mature, recombinant, full-length keratinocyte growth factor.

3. The keratinocyte growth factor fragment as claimed in claim 1, wherein the fragment exhibits a 10-fold increase in mitogenic activity as compared to the mature, recombinant, full-length keratinocyte growth factor.

4. The keratinocyte growth factor fragment as claimed in claim 1, wherein the fragment exhibits decreased cytotoxicity as compared to the mature, recombinant, full-length keratinocyte growth factor.

5. A conjugate comprising:

(a) a keratinocyte growth factor fragment or an analog thereof that comprises a portion of an amino acid sequence of mature, full-length keratinocyte growth factor, wherein the fragment exhibits at least a 2-fold increase in mitogenic activity as compared to the mature, recombinant, full-length keratinocyte growth factor and lacks a sequence comprising the first 23 N-terminal amino acid residues of the mature, full-length keratinocyte growth factor, and

(b) a toxin molecule.

6. The conjugate of claim 5, wherein the toxin molecule is selected from the group consisting of ricin A, diphtheria toxin, and saporin.

7. The conjugate of claim 5, wherein the fragment exhibits a 7-fold increase in mitogenic activity as compared to the mature, recombinant, full-length keratinocyte growth factor.

8. The conjugate of claim 5, wherein the fragment exhibits a 10-fold increase in mitogenic activity as compared to the mature, recombinant, full-length keratinocyte growth factor.

9. A therapeutic composition comprising:

(a) a keratinocyte growth factor fragment or an analog thereof that comprises a portion of an amino acid sequence of mature, full-length keratinocyte growth factor, wherein the portion exhibits at least a 2-fold increase in mitogenic activity as compared to the mature, recombinant, full-length keratinocyte growth factor but lacks a sequence comprising the first 23 N-terminal amino acid residues of the mature, full-length keratinocyte growth factor, and

(b) a pharmaceutically acceptable carrier.

10. A DNA molecule comprising a nucleotide sequence that encodes the keratinocyte growth factor fragment or analog of claim 1.

11. A DNA molecule comprising a nucleotide sequence that encodes the keratinocyte growth factor fragment or analog of claim 2.

12. A DNA molecule comprising a nucleotide sequence that encodes the keratinocyte growth factor fragment or analog of claim 3.

13. An expression vector comprising the DNA molecule of claim 10 and a regulatory sequence for expression of the DNA molecule.

14. The expression vector as claimed in claim 13, wherein the vector is a baculovirus.

15. The expression vector as claimed in claim 13, wherein the vector is a yeast vector.

16. The expression vector as claimed in claim 15, wherein the regulatory sequence comprises a promoter sequence selected from the group consisting of ADH2/GAPDH and GAPDH promoter sequences.

17. The expression vector as claimed in claim 16, wherein the vector further comprises a truncated pre-pro, α -factor leader sequence linked in frame to the DNA molecule of claim 10.

18. A host cell transformed with the expression vector of claim 13.

19. The host cell as claimed in claim 18, wherein the cell is selected from the group consisting of a bacterial cell, a yeast cell, a mammalian cell and an insect cell.

20. A method of producing a keratinocyte growth factor fragment comprising the steps of culturing the host cell of claim 19, and isolating the keratinocyte growth factor fragment from the culture.

21. A method for wound healing comprising applying the therapeutic composition of claim 9 to an area of a wound to be treated and allowing the wound to heal.

22. A method of treatment of a hyperproliferative disease of the epidermis comprising applying the conjugate of claim 5 to an area to be treated.

23. The method of treatment as claimed in claim 22, wherein the hyperproliferative disease is psoriasis or basal cell carcinoma.

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